

CONVEYOR OVEN PROFILING SYSTEM***ABSTRACT***

A system is disclosed for determining optimal process settings for a conveyor oven, such as a reflow oven used to reflow solder paste on a PCB assembly. According to a disclosed embodiment, an ideal temperature profile is obtained from the solder paste specifications of the solder paste to be reflowed in the oven. The ideal temperature profile of the paste includes a preheat phase, a soak phase, a reflow phase and a cooling phase. One or more profiles that fit the oven are obtained by aligning the beginning of each phase of the ideal profile with a forward end of an oven zone. The profile that best fits the oven is selected as a target profile for the reflow soldering process. The set points of the oven zones for effecting the target profile when the solder paste is conveyed through the oven are determined.